



Edge Energy, LLC

Well Name: OWL CREEK 1A 25-26-2C	Project Name: Sec. 30-T8N-R64W	Pad Name: OWL CREEK 1A
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DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL 890' FNL, 401' FWL Sec 30	0.00	0.00	0.00	1475695.302	3249791.854	40.635700	-104.599970
EP 980' FNL, 600' FEL Sec 25	7405.00	-72.84	-1001.93	1475612.293	3248790.715	40.635500	-104.603580
BHL 980', FNL 600' FWL Sec 26	7505.00	177.03	-10285.63	1475767.920	3239504.953	40.636180	-104.637030

Geodetic Datum:

North American Datum 1983
US State Plane 1983, Colorado Northern Zone

Elevation:

Ground Elevation: 5005.00
WELL @ 5020.00usft (Original Well Elev)

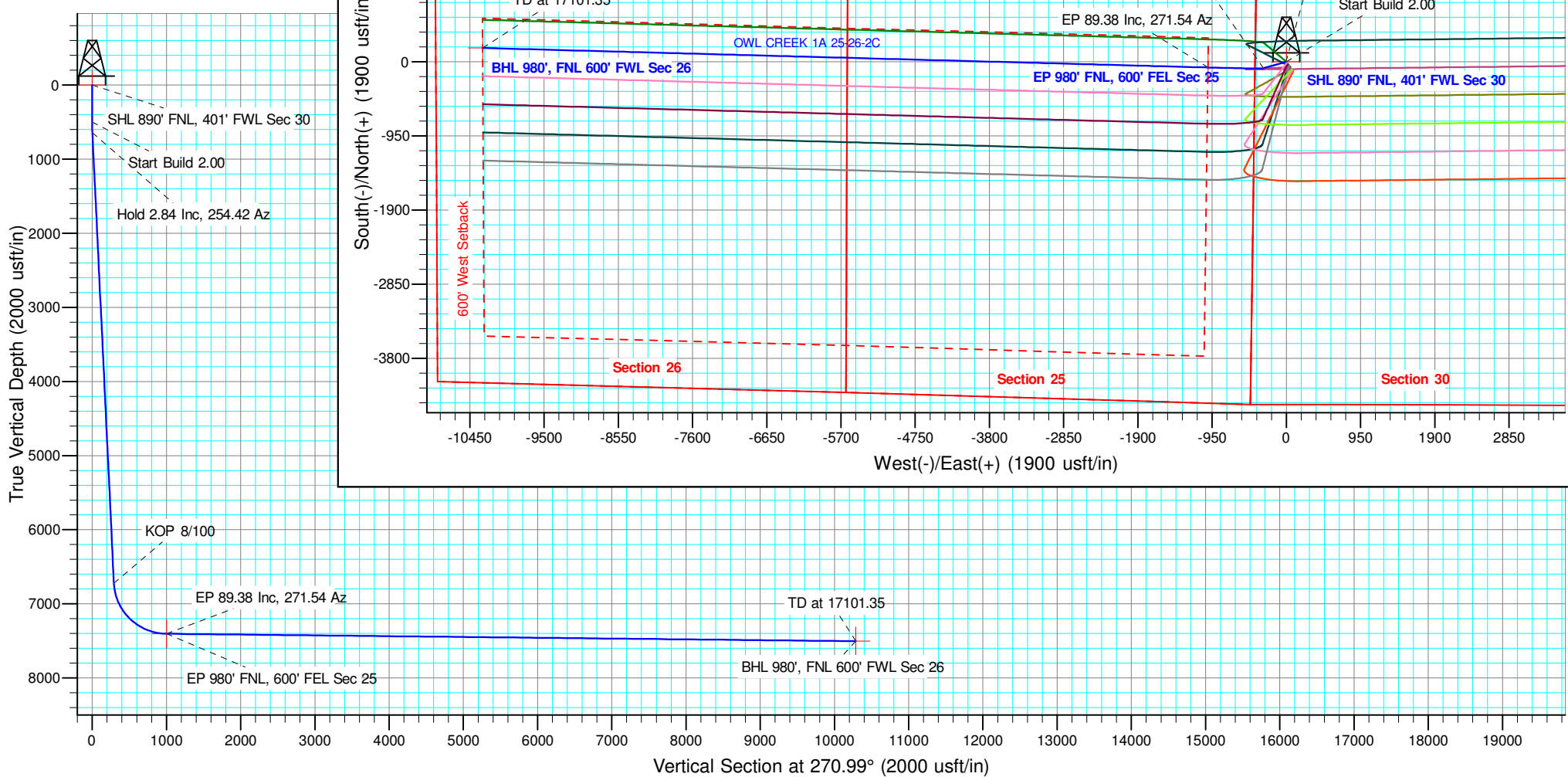
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Vsect	Departure	Annotation
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	Start Build 2.00
642.13	2.84	254.42	642.07	-0.95	-3.40	3.38	3.53	Hold 2.84 Inc, 254.42 Az
6730.41	2.84	254.42	6722.86	-82.02	-294.24	292.78	305.46	KOP 8/100
7813.74	89.38	271.54	7405.00	-72.84	-1001.93	1000.53	1013.35	EP 89.38 Inc, 271.54 Az
17101.35	89.38	271.54	7505.00	177.03	-10285.63	10287.16	10300.42	TD at 17101.35



Azimuths to True North
Magnetic North: 8.05°

Magnetic Field
Strength: 52435.0snT
Dip Angle: 67.05°
Date: 4/16/2018
Model: IGRF2015





Edge Energy, LLC

Sec. 30-T8N-R64W

OWL CREEK 1A

OWL CREEK 1A 25-26-2C

Wellbore #1

Plan: Design #1 16Apr18 mnh

Standard Planning Report - Geographic

22 April, 2018



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well OWL CREEK 1A 25-26-2C
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5020.00usft (Original Well Elev)
Project:	Sec. 30-T8N-R64W	MD Reference:	WELL @ 5020.00usft (Original Well Elev)
Site:	OWL CREEK 1A	North Reference:	True
Well:	OWL CREEK 1A 25-26-2C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 16Apr18 mnH		

Project	Sec. 30-T8N-R64W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	OWL CREEK 1A			
Site Position:		Northing:	1,475,706.118 usft	Latitude: 40.635730
From:	Lat/Long	Easting:	3,249,780.642 usft	Longitude: -104.600010
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.58 °

Well	OWL CREEK 1A 25-26-2C					
Well Position	+N/-S	0.00 usft	Northing:	1,475,695.298 usft	Latitude:	40.635700
	+E/-W	0.00 usft	Easting:	3,249,791.854 usft	Longitude:	-104.599970
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	5,005.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/16/2018	8.05	67.05	52,434.95315730

Design	Design #1 16Apr18 mnH			
Audit Notes:				
Version:		Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	270.99

Plan Survey Tool Program	Date	4/22/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	17,101.30 Design #1 16Apr18 mnH (Wellbo	MWD	
			OWSG MWD - Standard	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
642.13	2.84	254.42	642.07	-0.95	-3.40	2.00	2.00	0.00	254.42	
6,730.41	2.84	254.42	6,722.86	-82.02	-294.24	0.00	0.00	0.00	0.00	
7,813.74	89.38	271.54	7,405.00	-72.84	-1,001.93	8.00	7.99	1.58	17.15	EP 980' FNL, 600' FE
17,101.35	89.38	271.54	7,505.00	177.03	-10,285.63	0.00	0.00	0.00	0.00	BHL 980', FNL 600' F'



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well OWL CREEK 1A 25-26-2C
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5020.00usft (Original Well Elev)
Project:	Sec. 30-T8N-R64W	MD Reference:	WELL @ 5020.00usft (Original Well Elev)
Site:	OWL CREEK 1A	North Reference:	True
Well:	OWL CREEK 1A 25-26-2C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 16Apr18 mnh		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,475,695.298	3,249,791.854	40.635700	-104.599970
200.00	0.00	0.00	200.00	0.00	0.00	1,475,695.298	3,249,791.854	40.635700	-104.599970
400.00	0.00	0.00	400.00	0.00	0.00	1,475,695.298	3,249,791.854	40.635700	-104.599970
500.00	0.00	0.00	500.00	0.00	0.00	1,475,695.298	3,249,791.854	40.635700	-104.599970
Start Build 2.00									
600.00	2.00	254.42	599.98	-0.47	-1.68	1,475,694.812	3,249,790.177	40.635699	-104.599976
642.13	2.84	254.42	642.07	-0.95	-3.40	1,475,694.317	3,249,788.468	40.635697	-104.599982
Hold 2.84 Inc, 254.42 Az									
800.00	2.84	254.42	799.75	-3.05	-10.94	1,475,692.138	3,249,780.948	40.635692	-104.600010
1,000.00	2.84	254.42	999.50	-5.71	-20.49	1,475,689.378	3,249,771.421	40.635684	-104.600044
1,200.00	2.84	254.42	1,199.26	-8.38	-30.05	1,475,686.618	3,249,761.895	40.635677	-104.600079
1,400.00	2.84	254.42	1,399.01	-11.04	-39.60	1,475,683.858	3,249,752.368	40.635670	-104.600113
1,600.00	2.84	254.42	1,598.76	-13.70	-49.15	1,475,681.098	3,249,742.841	40.635662	-104.600147
1,800.00	2.84	254.42	1,798.52	-16.37	-58.71	1,475,678.338	3,249,733.315	40.635655	-104.600182
2,000.00	2.84	254.42	1,998.27	-19.03	-68.26	1,475,675.578	3,249,723.788	40.635648	-104.600216
2,200.00	2.84	254.42	2,198.02	-21.69	-77.82	1,475,672.817	3,249,714.261	40.635641	-104.600251
2,400.00	2.84	254.42	2,397.78	-24.35	-87.37	1,475,670.057	3,249,704.735	40.635633	-104.600285
2,600.00	2.84	254.42	2,597.53	-27.02	-96.92	1,475,667.297	3,249,695.208	40.635626	-104.600319
2,800.00	2.84	254.42	2,797.29	-29.68	-106.48	1,475,664.537	3,249,685.681	40.635619	-104.600354
3,000.00	2.84	254.42	2,997.04	-32.34	-116.03	1,475,661.777	3,249,676.155	40.635611	-104.600388
3,200.00	2.84	254.42	3,196.79	-35.01	-125.59	1,475,659.017	3,249,666.628	40.635604	-104.600423
3,400.00	2.84	254.42	3,396.55	-37.67	-135.14	1,475,656.257	3,249,657.101	40.635597	-104.600457
3,600.00	2.84	254.42	3,596.30	-40.33	-144.70	1,475,653.497	3,249,647.574	40.635589	-104.600492
3,800.00	2.84	254.42	3,796.06	-43.00	-154.25	1,475,650.737	3,249,638.048	40.635582	-104.600526
4,000.00	2.84	254.42	3,995.81	-45.66	-163.80	1,475,647.977	3,249,628.521	40.635575	-104.600560
4,200.00	2.84	254.42	4,195.56	-48.32	-173.36	1,475,645.217	3,249,618.994	40.635567	-104.600595
4,400.00	2.84	254.42	4,395.32	-50.99	-182.91	1,475,642.456	3,249,609.468	40.635560	-104.600629
4,600.00	2.84	254.42	4,595.07	-53.65	-192.47	1,475,639.696	3,249,599.941	40.635553	-104.600664
4,800.00	2.84	254.42	4,794.83	-56.31	-202.02	1,475,636.936	3,249,590.414	40.635546	-104.600698
5,000.00	2.84	254.42	4,994.58	-58.98	-211.58	1,475,634.176	3,249,580.888	40.635538	-104.600733
5,200.00	2.84	254.42	5,194.33	-61.64	-221.13	1,475,631.416	3,249,571.361	40.635531	-104.600767
5,400.00	2.84	254.42	5,394.09	-64.30	-230.68	1,475,628.656	3,249,561.834	40.635524	-104.600801
5,600.00	2.84	254.42	5,593.84	-66.97	-240.24	1,475,625.896	3,249,552.308	40.635516	-104.600836
5,800.00	2.84	254.42	5,793.60	-69.63	-249.79	1,475,623.136	3,249,542.781	40.635509	-104.600870
6,000.00	2.84	254.42	5,993.35	-72.29	-259.35	1,475,620.376	3,249,533.254	40.635502	-104.600905
6,200.00	2.84	254.42	6,193.10	-74.96	-268.90	1,475,617.616	3,249,523.728	40.635494	-104.600939
6,400.00	2.84	254.42	6,392.86	-77.62	-278.45	1,475,614.855	3,249,514.201	40.635487	-104.600974
6,600.00	2.84	254.42	6,592.61	-80.28	-288.01	1,475,612.095	3,249,504.674	40.635480	-104.601008
6,730.41	2.84	254.42	6,722.86	-82.02	-294.24	1,475,610.296	3,249,498.462	40.635475	-104.601030
KOP 8/100									
6,800.00	8.33	265.82	6,792.10	-82.85	-300.93	1,475,609.396	3,249,491.779	40.635473	-104.601055
7,000.00	24.30	269.69	6,983.43	-84.14	-356.88	1,475,607.544	3,249,435.843	40.635469	-104.601256
7,200.00	40.29	270.56	7,151.94	-83.72	-463.39	1,475,606.882	3,249,329.341	40.635470	-104.601640
7,400.00	56.29	270.99	7,284.59	-81.63	-612.19	1,475,607.459	3,249,180.524	40.635476	-104.602176
7,600.00	72.29	271.28	7,371.08	-78.03	-791.76	1,475,609.233	3,249,000.923	40.635486	-104.602823
7,800.00	88.28	271.53	7,404.72	-73.21	-988.20	1,475,612.065	3,248,804.452	40.635499	-104.603531
7,813.74	89.38	271.54	7,405.00	-72.84	-1,001.93	1,475,612.293	3,248,790.715	40.635500	-104.603580
EP 89.38 Inc, 271.54 Az									
8,000.00	89.38	271.54	7,407.01	-67.83	-1,188.11	1,475,615.414	3,248,604.494	40.635514	-104.604251
8,200.00	89.38	271.54	7,409.16	-62.45	-1,388.03	1,475,618.765	3,248,404.533	40.635529	-104.604971
8,400.00	89.38	271.54	7,411.31	-57.07	-1,587.94	1,475,622.117	3,248,204.573	40.635543	-104.605692
8,600.00	89.38	271.54	7,413.47	-51.69	-1,787.86	1,475,625.468	3,248,004.613	40.635558	-104.606412
8,800.00	89.38	271.54	7,415.62	-46.31	-1,987.77	1,475,628.819	3,247,804.652	40.635573	-104.607132
9,000.00	89.38	271.54	7,417.77	-40.93	-2,187.69	1,475,632.170	3,247,604.692	40.635587	-104.607853



Microsoft
Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well OWL CREEK 1A 25-26-2C
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5020.00usft (Original Well Elev)
Project:	Sec. 30-T8N-R64W	MD Reference:	WELL @ 5020.00usft (Original Well Elev)
Site:	OWL CREEK 1A	North Reference:	True
Well:	OWL CREEK 1A 25-26-2C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 16Apr18 mnh		

Planned Survey										
Measured			Vertical			Map	Map			
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Northing	Easting		Latitude	Longitude
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)			
9,200.00	89.38	271.54	7,419.93	-35.54	-2,387.61	1,475,635.522	3,247,404.732		40.635602	-104.608573
9,400.00	89.38	271.54	7,422.08	-30.16	-2,587.52	1,475,638.873	3,247,204.771		40.635617	-104.609293
9,600.00	89.38	271.54	7,424.23	-24.78	-2,787.44	1,475,642.224	3,247,004.811		40.635632	-104.610014
9,800.00	89.38	271.54	7,426.39	-19.40	-2,987.35	1,475,645.576	3,246,804.851		40.635646	-104.610734
10,000.00	89.38	271.54	7,428.54	-14.02	-3,187.27	1,475,648.927	3,246,604.890		40.635661	-104.611454
10,200.00	89.38	271.54	7,430.69	-8.64	-3,387.19	1,475,652.278	3,246,404.930		40.635676	-104.612174
10,400.00	89.38	271.54	7,432.85	-3.26	-3,587.10	1,475,655.629	3,246,204.970		40.635690	-104.612895
10,600.00	89.38	271.54	7,435.00	2.12	-3,787.02	1,475,658.981	3,246,005.009		40.635705	-104.613615
10,800.00	89.38	271.54	7,437.15	7.50	-3,986.93	1,475,662.332	3,245,805.049		40.635720	-104.614335
11,000.00	89.38	271.54	7,439.31	12.88	-4,186.85	1,475,665.683	3,245,605.089		40.635734	-104.615056
11,200.00	89.38	271.54	7,441.46	18.26	-4,386.77	1,475,669.034	3,245,405.128		40.635749	-104.615776
11,400.00	89.38	271.54	7,443.61	23.64	-4,586.68	1,475,672.386	3,245,205.168		40.635764	-104.616496
11,600.00	89.38	271.54	7,445.77	29.02	-4,786.60	1,475,675.737	3,245,005.208		40.635778	-104.617217
11,800.00	89.38	271.54	7,447.92	34.40	-4,986.51	1,475,679.088	3,244,805.248		40.635793	-104.617937
12,000.00	89.38	271.54	7,450.07	39.78	-5,186.43	1,475,682.440	3,244,605.287		40.635808	-104.618657
12,200.00	89.38	271.54	7,452.23	45.16	-5,386.35	1,475,685.791	3,244,405.327		40.635822	-104.619378
12,400.00	89.38	271.54	7,454.38	50.55	-5,586.26	1,475,689.142	3,244,205.367		40.635837	-104.620098
12,600.00	89.38	271.54	7,456.53	55.93	-5,786.18	1,475,692.493	3,244,005.406		40.635852	-104.620818
12,800.00	89.38	271.54	7,458.69	61.31	-5,986.09	1,475,695.845	3,243,805.446		40.635866	-104.621539
13,000.00	89.38	271.54	7,460.84	66.69	-6,186.01	1,475,699.196	3,243,605.486		40.635881	-104.622259
13,200.00	89.38	271.54	7,462.99	72.07	-6,385.93	1,475,702.547	3,243,405.525		40.635896	-104.622979
13,400.00	89.38	271.54	7,465.15	77.45	-6,585.84	1,475,705.899	3,243,205.565		40.635910	-104.623700
13,600.00	89.38	271.54	7,467.30	82.83	-6,785.76	1,475,709.250	3,243,005.605		40.635925	-104.624420
13,800.00	89.38	271.54	7,469.45	88.21	-6,985.67	1,475,712.601	3,242,805.644		40.635939	-104.625140
14,000.00	89.38	271.54	7,471.61	93.59	-7,185.59	1,475,715.952	3,242,605.684		40.635954	-104.625860
14,200.00	89.38	271.54	7,473.76	98.97	-7,385.51	1,475,719.304	3,242,405.724		40.635969	-104.626581
14,400.00	89.38	271.54	7,475.91	104.35	-7,585.42	1,475,722.655	3,242,205.763		40.635983	-104.627301
14,600.00	89.38	271.54	7,478.07	109.73	-7,785.34	1,475,726.006	3,242,005.803		40.635998	-104.628021
14,800.00	89.38	271.54	7,480.22	115.11	-7,985.25	1,475,729.358	3,241,805.843		40.636012	-104.628742
15,000.00	89.38	271.54	7,482.37	120.49	-8,185.17	1,475,732.709	3,241,605.882		40.636027	-104.629462
15,200.00	89.38	271.54	7,484.53	125.87	-8,385.09	1,475,736.060	3,241,405.922		40.636042	-104.630182
15,400.00	89.38	271.54	7,486.68	131.25	-8,585.00	1,475,739.411	3,241,205.962		40.636056	-104.630903
15,600.00	89.38	271.54	7,488.84	136.64	-8,784.92	1,475,742.763	3,241,006.002		40.636071	-104.631623
15,800.00	89.38	271.54	7,490.99	142.02	-8,984.83	1,475,746.114	3,240,806.041		40.636085	-104.632343
16,000.00	89.38	271.54	7,493.14	147.40	-9,184.75	1,475,749.465	3,240,606.081		40.636100	-104.633064
16,200.00	89.38	271.54	7,495.30	152.78	-9,384.67	1,475,752.817	3,240,406.121		40.636115	-104.633784
16,400.00	89.38	271.54	7,497.45	158.16	-9,584.58	1,475,756.168	3,240,206.160		40.636129	-104.634504
16,600.00	89.38	271.54	7,499.60	163.54	-9,784.50	1,475,759.519	3,240,006.200		40.636144	-104.635225
16,800.00	89.38	271.54	7,501.76	168.92	-9,984.41	1,475,762.870	3,239,806.240		40.636158	-104.635945
17,000.00	89.38	271.54	7,503.91	174.30	-10,184.33	1,475,766.222	3,239,606.279		40.636173	-104.636665
17,101.35	89.38	271.54	7,505.00	177.03	-10,285.63	1,475,767.920	3,239,504.953		40.636180	-104.637030
TD at 17101.35										



Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well OWL CREEK 1A 25-26-2C
Company:	Edge Energy, LLC	TVD Reference:	WELL @ 5020.00usft (Original Well Elev)
Project:	Sec. 30-T8N-R64W	MD Reference:	WELL @ 5020.00usft (Original Well Elev)
Site:	OWL CREEK 1A	North Reference:	True
Well:	OWL CREEK 1A 25-26-2C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1 16Apr18 mnh		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
SHL 890' FNL, 401' FWL - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,475,695.302	3,249,791.854	40.635700	-104.599970
EP 980' FNL, 600' FEL 5 - plan hits target center - Point	0.00	0.00	7,405.00	-72.84	-1,001.93	1,475,612.293	3,248,790.715	40.635500	-104.603580
BHL 980', FNL 600' FWL - plan hits target center - Point	0.00	0.00	7,505.00	177.03	-10,285.63	1,475,767.920	3,239,504.953	40.636180	-104.637030

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
500.00	500.00	0.00	0.00	Start Build 2.00
642.13	642.07	-0.95	-3.40	Hold 2.84 Inc, 254.42 Az
6,730.41	6,722.86	-82.02	-294.24	KOP 8/100
7,813.74	7,405.00	-72.84	-1,001.93	EP 89.38 Inc, 271.54 Az
17,101.35	7,505.00	177.03	-10,285.63	TD at 17101.35